at this point. Do you want to break at this point or 1 should we proceed because of time constraints, the 2 3 weather and all? Maybe we should proceed. I think we'll just go ahead and 4 skip the break, and if people need to -- yeah. Well, 5 that's supposed to speed things up if everybody needs 6 to leave. 7 Okay. Bob Doyle has a brief announcement 8 while Alicia is gone. 9 10 MR. DOYLE: If anyone needs a cab, sign up at the registration desk outside, you know, when you 11 feel you have a minute to get a cab if you need one to 12 leave here. 13 If you didn't hear that, Dr. Phillips 14 indicated that if you're going to National Airport, 15 considering the weather, you're better off going by 16 the subway. That would mean when you get the cab, you 17 want to take it over to the Shady Grove station and 18 take the Red Line down. 19 CHAIRMAN GARRA: The next phase here is to 2.0 ask if there's any public comment. At this point, 21 this is the second of two sections where the public is 22 allowed to speak. 23 Are there any of the public who would like 24 25 to address the panel?

1	(No response.)
2	CHAIRMAN GARRA: I see no takers on that.
3	MR. DOYLE: Or none of the speakers that
4	were missing from this morning, or one? Apparently
5	not.
6	CHAIRMAN GARRA: Okay. So at this point
7	then, before we move to the panel recommendations and
8	vote, is there anything additionally that the FDA
9	would like to address?
10	MR. SEGERSON: I think we're fine. We
11	appreciate the discussion, and we're looking forward
12	to your recommendations.
13	CHAIRMAN GARRA: Finally, is there any
14	last comments the sponsor would like to make at this
15	point?
16	MR. DOYLE: Your last chance.
17	CHAIRMAN GARRA: This is your last chance.
18	(No response.)
19	CHAIRMAN GARRA: Okay. So
20	MR. DOYLE: Dr. Phillips gave me one other
21	little tidbit concerning transportation, that it's
22	perfectly clear outside there's no snow accumulation
23	and no snow on the ground. So it looks like things
24	should at least in this area
25	(Laughter.)

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MR. DOYLE: I know not everyone is from 1 this area, but in this area, you should be able to get 2 3 around fine. CHAIRMAN GARRA: You could still take the 4 subway though if you don't like light. 5 6 Okay. So at this point then we're going 7 to move to the panel recommendations regarding PMA P000041. 8 The medical device amendments to the 9 Federal Food, Drug, and Cosmetic Act, as amended by 10 11 the Safe Medical Devices Act of 1990, allows the Food and Drug Administration to obtain a recommendation 12 from an expert advisory panel on designated medical 13 14 device pre-market approval applications, PMAs, that 15. are filed with the agency. The PMA must stand on its own merits, and your recommendation must be supported 16 17 by safety and effectiveness data in the application or 18 by applicable publicly available information. Safety is defined in the act as reasonable 19 assurance based on valid scientific evidence that the 20 21 probable benefits to health under conditions of 22 intended use outweigh any probably risks. 23 Effectiveness is defined as reasonable 24 assurance that in a significant proportion of the 25 population the use of the device for its intended uses

and conditions of use when labeled will provide clinically significant results. 2 3 Your options for recommendation and vote are as follows. 4 It's approvable if there are no 5 conditions attached. It can be approvable with conditions. In this situation the panel may recommend 6 7 that the PMA be found approvable subject to specified conditions, such as physician or patient education, 8 labeling changes, or further analysis of existing 9 10 data. 11 Prior to voting, all of the conditions 12 should be discussed by the panel and written down 13 also. 14 Finally, it can be not approvable. 15 panel may recommend that the PMA is not approvable if 16 the data do not provide a reasonable assurance that 17 the device is save or if a reasonable assurance has 18 not been given that the device is effective under the 19 conditions of use prescribed, recommended, 20 suggested in the proposed labeling. 21 If the vote is for not approvable, the 22 panel should indicate what steps the sponsor may take 23 to make the device approvable. 24 Okay. At this point, I'm supposed to have 25 someone make a motion. This could be sort of a

1	complicated step. Normally the lead discussant gets
2	to initially propose the motion that gets hacked over
3	by the rest of the panel.
4	So I'll let Dr. Toledano make a motion.
5	DR. TOLEDANO: I forgot about that part.
6	CHAIRMAN GARRA: I would have told you at
7	the break, but we didn't have one.
8	DR. TOLEDANO: Oh, okay. I'm trying to
9	remember how this goes, and so just as a point of
10	clarification, I think if we move to approve with
11	conditions, we do that motion and then we discuss each
12	condition. That is correct. Oh, good.
13	I will make a motion to approve with
14	conditions.
15	CHAIRMAN GARRA: Is there
16	DR. BERG: I'll second it.
17	CHAIRMAN GARRA: Okay. We have a second
18	to that.
19	Let's have a little discussion now on the
20	conditions under which so we're approving it with
21	conditions, and then approving it with conditions
22	again. Is that what you're saying?
23	Okay. So I'll have, first of all, a vote
24	by the panel whether we should approve this with
25	conditions to be specified, and then we'll go back

1	after we get the conditions and approve it again.
2	Okay?
3	Those in favor, raise your hands.
4	(Show of hands.)
5	CHAIRMAN GARRA: Those opposed.
6	(No response.)
7	MR. SEGERSON: Excuse me. Would you
8	announce the vote, please?
9	CHAIRMAN GARRA: The vote was five in
10	favor, none against.
11	Okay. So now that we've decided to
12	approve it with conditions, we have to decide on what
13	conditions, and I would like, rather than okay. I
14	think what we'll do is we'll just go around and let
15	each member propose conditions, and then if it gets to
16	you and they're already covered, then you don't need
17	to do anything.
18	So, Wendie, do you want to start?
19	DR. BERG: I would like to propose that
20	there be conditions on the labeling to include
21	restricting this, at least state that it was validated
22	in patients who are men who have a smoking history,
23	and that it has not been validated for use in women or
24	in non-smokers.

I'm not sure about the exact language,

1	but
2	CHAIRMAN GARRA: Okay. Any discussion or
3	revisions to that?
4	DR. TOLEDANO: I think also the ages. Oh,
5	I'm sorry.
6	CHAIRMAN GARRA: That's okay. Anybody can
7	chime in here.
8	Dr. Mehta.
9	DR. MEHTA: Minesh Mehta here.
10	I'd just like to expand that a little. I
11	think we should be specific about the population in
12	which it should be used, given the fact that it was
13	tested on a very limited population. My suggestion
14	would be it should be male adult smokers with a high
15	risk of suspicion for cancer, and then if date are
16	provided for other populations, the label can be
17	expanded.
18	DR. TOLEDANO: So this is Toledano.
19	And I just wanted to say as far as that
20	adult goes, I think the 45 year cutoff should be
21	explicitly stated in terms of the validation.
22	CHAIRMAN GARRA: And should we state that
23	the films need to be 20 years old, as well?
24	DR. TOLEDANO: No.
25	(Laughter)

1	DR. BERG: We'll let them slide on that
2	one.
3	CHAIRMAN GARRA: We want to be certain
4	about this now.
5	DR. MEHTA: That doesn't affect the
6	biology. So I think we can live with it.
7	CHAIRMAN GARRA: Okay.
8	DR. MEHTA: The other factors affect the
9	biology.
10	CHAIRMAN GARRA: Okay.
11.	DR. SMITH: John Smith here.
12	And I think along those lines we have to
13	be pretty clear, and I think it's in the labeling
14	somewhere at this point, but may be more prominently
15	featured what the actual benefit was in the study so
16	that people k now what they're getting.
17	CHAIRMAN GARRA: Dr. Smith, we are at the
18	point where we might have to specify what we think
19	that might be. Do you have a how would you like to
20	phrase that?
21	DR. SMITH: It's difficult. I mean, I'm
22	not a statistician, and just by the fact that if you
23	looked at some of what I gleaned from this morning,
24	the fact that it looked like approximately half of the
25	regions of interest did not actually include the

lesions that ended up being identified by follow-up 1 2 studies. 3 don't know about the terminology 4 "limited." CHAIRMAN GARRA: Did you want something on 5 the statement of the magnitude of the benefit or the 6 fact that -- further amplification on the fact that 7 8 readers were identifying areas that were not the 9 cancer, but still ended up finding a cancer? 10 DR. SMITH: Yeah, or maybe I want both 11 I think that, you know, you're looking at just 12 to pick some of the numbers that I saw and the 13 benefits around the eight percent increase in 14 sensitivity range, but then it's lower than that. 15 It's hard for me to be more specific because I think the numbers are a little ambiguous. 16 17 It looks like it had some benefit, but I think the 18 message that we have to send in the labeling is that 19 every region of interest does not convey that there is 20 a cancer there, and I think it would be unwise to send 21 it out there with labeling that suggested that every 22 time a region of interest is drawn that there is 23 definitely an abnormality in that area. 24 DR. TOLEDANO: I'd like to pick up on that 25 point, if I may.

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point, if I may.

CHAIRMAN GARRA: Yes, please. 1 DR. TOLEDANO: Dr. Toledano. 2 also felt that there could be more 3 explicit mention of the types of false positive ROIs 4 and the occasions where they might be missing in the 5 warnings and precautions of both the labeling and the 6 7 user's manual, and specific suggestions would include to state that ROIs may be present that are just 8 9 marking anatomical structures and things like that, 10 just to make it clear what's happening and also more 11 on the warnings and precautions, 12 radiologist interprets the film and sees a possible 13 lesion and that lesion is not marked by the device, that does not mean that the lesion is not a cancer. 14 It just means that the device didn't pick it up, a nd 15 people should really be using this as a CAD tool. 16 17 And I know that that is emphasized to a 18 point. I just wonder how much stronger and how much 19 more explicit it could be made. 20 CHAIRMAN GARRA: Dr. Harms. DR. HARMS: 21 Steve Harms. 22 I think we're extrapolating a lot into 23 this data as though it was a -- we're thinking about 24 this as a randomized, prospective, clinical trial as

reviewing,

we're used to

25

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DR. HARMS: I would go along with stating 1 that what the trial said, but not in restricting its 2 3 use. Yeah, and I think the 4 CHAIRMAN GARRA: only thing that Dr. Berg wanted was an explicit 5 6 statement somewhere in the labeling that the trial did 7 not include certain groups: women, children, that sort of thing. 8 DR. BERG: Dr. Wendie Berg. 9 10 I just -- yeah, exactly. I wanted to not 11 only make it clear what was done to validate or where this machine has been validated, but I also think it 12 13 should be very explicitly stated, the level of 14 sensitivity that was achieved with this machine because I think it gives the user a lot better sense 15 to know that 66 percent of cancers ranging from nine 16 17 to 30 millimeters in size were detected by this 18 machine, depicted by this machine. That is a very useful number. 19 20 CHAIRMAN GARRA: Instead of just having 21 the change in sensitivity that a user could expect, 22 you want to see what the machine --23 DR. BERG: I want it very explicitly spelled out what has been achieved. It could be done 24 25 in a few sentences, but I think it gives a much better

that, okay, half or so of the cancers that I'm 2 interested in may not be seen by this machine. 3 4 CHAIRMAN GARRA: Dr. Mehta 5 DR. MEHTA: Just a clarification question. Doesn't the label have two components? 6 component that says this is what it's approved for, 7 and then a second component that says a warning. 8 the issue about the radiologist picking up a cancer 9 and then relying on the machine to say this is not a 10 cancer, maybe that should go in the warning component 11 12 saying when this is done disastrous results can occur 13 because that's potentially what would have happened to 14 those patients. The cancers would have been missed. 15 CHAIRMAN GARRA: Is there a warning 16 section? 17 DR. BERG: There is. PARTICIPANTS: Yes. 18 DR. MEHTA: 19 The reason I state that is 20 because on the document dated January 18th, 2001, page 21 2, the sponsor was asked the specific question: does 22 the device provide diagnostic information on which 23 treatment or therapy is based such that if misapplied, 24 it could result in serious injury or death? And the 25 response was no.

perspective when you're going to start using this

I think that's not correct. If it's misapplied, it can result in serious injury or death because it can miss a cancer.

CHAIRMAN GARRA: Yeah, they state it in sort of in the warnings, in their labeling section. In their PMA they state that the device will miss some little nodules, and the user should not be dissuaded from working up a finding if the device fails to mark that site. That's fairly explicit. We could put it in bold letters or something.

I think the FDA sort of understands what we mean by that.

DR. MEHTA: Well, again, to go back to the drug scenario, often what's done in these warnings is people are told if you do this with this drug, expect this problem, and I think that's how specific the warning needs to be, saying if you rely on this to read your chest X-rays as opposed to the radiologist doing the chest X-ray, this is what can happen. You can miss a cancer.

You know, the warning has to be not just a very general warning people think it's just a feel good kind of thing, but a real life scenario, which is what happened in this study. Cancers were missed when radiologists changed their mind.

CHAIRMAN GARRA: How about -- I think we could couple Wendie's suggestion of giving the percentage for sensitivity, saying it's 66 percent accurate. So do not use this to change your initial interpretation unless it's to add nodules. Otherwise you will miss cancers, something like that.

Any other comments?

DR. BERG: I have one comment which actually relates to experience with what's happened with mammography with the R-2 technologies, and that is should there be anywhere in here that this is intended only to be used in conjunction with the radiologist's interpretation of the X-ray more explicitly. Because what's happened there is people are advertising on the Web that they'll read your mammogram and put it through an R-2 and send you the printout, and then you have to go back to the radiologist and talk to him about it.

And I certainly don't want to see that happening with chest X-rays. So is there anything we can do to preclude that possibility?

CHAIRMAN GARRA: That would just be a modification on the indications, right? Use as an adjunct?

DR. TOLEDANO: I believe it's explicit in

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1	the indications.
2	DR. SACKS: It's pretty explicit in there
3	now.
4	This is Bill Sacks.
5	I would just say we did put that in the
6	labeling. That has limited effectiveness, but our
7	Office of Compliance gets called in when such a thing
8	happens.
9	CHAIRMAN GARRA: Yeah, it says the device
10	is intended for use an aid only after the physician
11	has performed an initial interpretation of the
12	radiograph.
13	DR. SACKS: It's right in the indication,
14	yeah.
15	DR. BERG: But that doesn't preclude
16	somebody advertising that they'll send it through and
17	spit out a printout. It says after. It doesn't say
18	at the time of. I don't know.
19	CHAIRMAN GARRA: I don't think
20	DR. BERG: I'll let you guy wrestle with
21	that. I just throw that out there for discussion.
22	CHAIRMAN GARRA: That's for the
23	malpractice lawyer, what you're doing.
24	(Laughter.)
25	CHAIRMAN GARRA: I don't think they can do

1	that. I think that they don't regulate the practice
2	of medicine. They can only regulate the label, and if
3	people choose to ignore it, there's only so much you
4	can do.
5	Okay. So let me try to state the various
6	you weren't writing these down, were you?
7	MR. DOYLE: I was.
8	CHAIRMAN GARRA: Bob Doyle has written
9	them down, and we will listen to them, make slight
10	modifications and decide whether we can vote on these
11	modifications.
12	MR. DOYLE: There were a lot of things
13	thrown out there, but I boiled down to five
14	conditions, and, again, subject to continuous
15	rewording. In fact, this first one was debated. So
16	I'll just put it down as it came across.
17	First, the device should be used for male
18	adult smokers over 45 years old with high risk of
19	cancer.
20	Dr. Harms seemed to have a
21	CHAIRMAN GARRA: That's not go ahead.
22	DR. HARMS: I think I would reword that
23	perhaps to say the device was tested in a group of
24	male smokers.
25	DR. BERG: I would change the word

1	"tested" to "validated."
2	DR. HARMS: "Validated," yeah. That's
3	probably better.
4	DR. SMITH: John Smith.
5	Just, I guess, the attorney in me. Using
6	"should" is a very dangerous thing. You're almost
7 ಟ್	implying a standard of care. Validation, much more
8	acceptable.
9	MR. DOYLE: The device was validated with
10	adult smokers over 45 years old with a high risk of
11	cancer.
12	DR. BERG: Adult male.
13	MR. DOYLE: Yeah, adult.
14	CHAIRMAN GARRA: Dr. Segerson.
15	MR. SEGERSON: I just wanted to recap
16	briefly the way we're doing the labeling these days.
17	The condensed version of the labeling that we approve
18	is we're tentatively calling essential prescribing
19	information. That now includes a section describing
20	the clinical data on which it's based, and that
21	section would include a thorough description of the
22	target population used to develop this data.
23	And then that's separate from the
24	indication for use, which doesn't necessarily have to
25	coincide, and as you saw, right now we tentatively

1	have a different I mean suggested indications for
2	use, and of course we have your comments on that as
3	well.
4	And also, of course, as somebody already
.5	said, we have warnings. We have contraindications.
6	We have precautions, a lot of other sections in that
7	essential prescribing information.
8	CHAIRMAN GARRA: I think the intent here
9	of the panel is to make sure it's prominently
10	displayed near the front because we figure that people
11	won't read more than two paragraphs into it.
12	DR. BERG: Exactly.
13	CHAIRMAN GARRA: Unfortunately.
14	MR. SEGERSON: Okay.
15	CHAIRMAN GARRA: But you're right.
16	MR. DOYLE: I'll read this first condition
17	once more, and then maybe you can vote on this if it's
18	close.
19	The device was so we're going to have
20	a condition that we'll indicate in the labeling the
21	device was validated with adult male smokers over 45
22	years old with a high risk of cancer.
23	They should vote on that.
24	CHAIRMAN GARRA: Okay. Those in favor of
25	that condition being placed, raise your hands.

1	(Show of hands.)
2	MR. DOYLE: Four and one abstention. Do
3	you want to say that?
4	CHAIRMAN GARRA: There are four yeses and
5	one abstention, no noes.
6	Okay. Let's move on to the next one.
7	MR. DOYLE: Oh, sorry. This one was also
. 8	labeling. Labeling will identify the degree of
9	benefit that can be expected from the device.
1.0.	CHAIRMAN GARRA: I think there, yeah, we
11	mean to be that we would like it to be as specific as
12	possible regarding overall performance, sensitivity,
13	and change in sensitivity that can be expected.
14	MR. DOYLE: Do you want to take a vote on
15	that?
16	CHAIRMAN GARRA: Okay. Those in favor of
17	that condition being placed raise your hands.
18	(Show of hands.)
19	CHAIRMAN GARRA: Those opposed?
20	(No response.)
21	CHAIRMAN GARRA: Dr. Mehta is going to be
22	upset. He's missing all of these votes.
23	MR. DOYLE: Do you want to announce that
24	vote?
25	CHAIRMAN GARRA: The vote was four in

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1	favor, one abstention, no negatives.
2	MR. DOYLE: The third one I have is more
3	explicit description of the ROIs that the device is
4	likely to mark, to alert users that the device will
5	generate substantial numbers of false positives.
6	DR. TOLEDANO: What about the false
7	negatives?
8	MR. DOYLE: Do you want to add "and false
9	negatives"?
10	DR. TOLEDANO: Yeah, because I think
11	that's the whole point, is like that if the
12	radiologist sees something and the device doesn't mark
13	it, we don't want them to change their answer. We
14	want them to keep it.
15	MR. DOYLE: All right. I added in false
16	negatives.
17	CHAIRMAN GARRA: Now, the question here is
18	that sort of dovetails into the one that we were going
19	to put in the warnings.
20	DR. TOLEDANO: Well, the warnings are part
21	of the labeling.
22	CHAIRMAN GARRA: Right, but the warning
23	section was also going to carry something about the
24	sensitivity, machine sensitivity alone.
25	DR. TOLEDANO: Oh, right, okay.

1	MR. DOYLE: We'll work it in.
2	CHAIRMAN GARRA: Okay. Those in favor of
3	that condition being place.
4	DR. TOLEDANO: I'd like to read it again.
5	CHAIRMAN GARRA: Yeah, read it one more
6	time.
7	MR. DOYLE: Dr. Mehta didn't hear it.
. 8	A more explicit description of the ROIs
9	that the device is likely to mark to alert users that
10	the device will generate substantial numbers of false
11	positives and false negatives.
12	CHAIRMAN GARRA: Those in favor, raise
13	your hands.
	(-)
14	(Show of hands.)
15	(Show of hands.) CHAIRMAN GARRA: We have five in favor, no
15	CHAIRMAN GARRA: We have five in favor, no
15	CHAIRMAN GARRA: We have five in favor, no negatives.
15 16 17	CHAIRMAN GARRA: We have five in favor, no negatives. MR. DOYLE: The next one I have is state
15 16 17 18	CHAIRMAN GARRA: We have five in favor, no negatives. MR. DOYLE: The next one I have is state explicitly the specifics of what the device has shown
15 16 17 18 19	CHAIRMAN GARRA: We have five in favor, no negatives. MR. DOYLE: The next one I have is state explicitly the specifics of what the device has shown to achieve.
15 16 17 18 19 20	CHAIRMAN GARRA: We have five in favor, no negatives. MR. DOYLE: The next one I have is state explicitly the specifics of what the device has shown to achieve. Some of these seem to overlap, but that
15 16 17 18 19 20 21	CHAIRMAN GARRA: We have five in favor, no negatives. MR. DOYLE: The next one I have is state explicitly the specifics of what the device has shown to achieve. Some of these seem to overlap, but that was the next one. That was based on Dr. Berg's
15 16 17 18 19 20 21 22	CHAIRMAN GARRA: We have five in favor, no negatives. MR. DOYLE: The next one I have is state explicitly the specifics of what the device has shown to achieve. Some of these seem to overlap, but that was the next one. That was based on Dr. Berg's statement explicitly.
15 16 17 18 19 20 21 22 23	CHAIRMAN GARRA: We have five in favor, no negatives. MR. DOYLE: The next one I have is state explicitly the specifics of what the device has shown to achieve. Some of these seem to overlap, but that was the next one. That was based on Dr. Berg's statement explicitly. CHAIRMAN GARRA: Have we already covered

1	DR. BERG: I guess the issue is have we
2	really established that they're going to include the
3	exact sensitivity of the device.
4	CHAIRMAN GARRA: I want to say that.
5	DR. BERG: I want to see that in there.
6	CHAIRMAN GARRA: Yeah.
7	MR. DOYLE: State the exact sensitivity?
8	DR. BERG: I mean the number I had from
.9	the presentations and from the PMA was 66 percent
10	sensitivity has been demonstrated for cancers nine to
11	30 millimeters in size. I mean, I think that number,
12	if I were going to use this, I'd want to know that
13	number right up front.
14	CHAIRMAN GARRA: So I would couple that in
15	with the statement on the change.
16	MR. DOYLE: Well, we can have all of these
17	conditions. There's no harm in having some extra
18	conditions.
19	So state explicitly the specifics of what
20	the device has been shown to achieve, and specifically
21	the sensitivity shown for the device.
22	CHAIRMAN GARRA: Okay. All those in favor
23	of that condition being placed?
24	(Show of hands.)
25	CHAIRMAN GARRA: Five in favor.
1	

1	MR. DOYLE: And the last one I have
2	written down: add a warning that indicates what can
3	potentially happen if a cancer is missed.
4	CHAIRMAN GARRA: I think is that
5	what I think we wanted to state that slightly
6	differently than that, didn't we, Dr. Mehta?
7	DR. MEHTA: Yeah, I think that might be a
8	bit too general. I think what we might want to state
9	is that the primary interpretation should be the
10	radiologist's interpretation, a nd a negative result on
11	the CAD assisted reading should not construe
12	sufficient reason to alter the diagnosis.
13	Because this could lead to a missed
14	cancer.
15	DR. BERG: They say that already. It says
16	the device will miss some lung nodules and user should
17	not be dissuaded from working at the finding if the
18	device fails to mark that site. Do you want something
19	different from that?
20	DR. MEHTA: Well, I think the specific
21	issue is, one, the radiologist picks it up, and then
22	going back
23	MR. SEGERSON: The transcriber didn't hear
24	your comment, Dr. Berg.
25	DR. BERG: Oh, I said the comment is

т.	alleady in the labeling section in their PMA, which
2	says the device will miss some lung nodules, and a
3	user should not be dissuaded from working up a finding
4	if the device fails to mark that site.
5	I just want clarification of what do we
6	want it to say different from that.
7	DR. MEHTA: So it sounds like that's
8	covered.
9	CHAIRMAN GARRA: I would just add maybe a
10	sentence to that. I would just add in that sentence
11	I think you wanted some emphasis to that sentence
12	DR. MEHTA: Exactly.
13	CHAIRMAN GARRA: which is a little
14	vague, and I would say if this procedure is not
15	followed, cancers will be missed using this device.
16	DR. MEHTA: I agree. I feel there has to
17	be some urgency in that statement because we don't
18	want some radiologist who thinks this is the most
19	sophisticated computer device out there to say, "Well,
20	this is a computer. Obviously it knows better than I
21	do."
22	CHAIRMAN GARRA: So you can just append
23	that sentence to the existing one. If this procedure
24	is not followed, cancers will be missed using this
25	device.

1	MR. DOYLE: Okay.
2	CHAIRMAN GARRA: That's in the warning
3	section.
4	MR. DOYLE: If the procedure and warnings
5	are not followed, potential cancers may be missed,
6	right?
7,	CHAIRMAN GARRA: Yeah, but I think we want
8	to couple it to that specific one because they're
9	going to think that's a general statement.
10	DR. MEHTA: Which one is that?
11	CHAIRMAN GARRA: Well, it doesn't have a
12	number. It's bullet three, sub-bullet one.
13	You ought to number these things, you
14	guys.
15	PARTICIPANT: We'll take that under
16	advisement.
17	MR. DOYLE: All right. Based on that
18	bullet, sub-bullet two, bullet three, sub-bullet
19 ·	two
20	CHAIRMAN GARRA: Sub-bullet one.
21	MR. DOYLE: Sub-bullet number one, if this
22	procedure is not followed, there's a potential that
23	cancers may be missed.
24	CHAIRMAN GARRA: Is that strong enough,
25	"potential that cancers may be missed"?
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1	Okay. Those in favor of this condition
2 2	being placed?
3	(Show of hands.)
4	CHAIRMAN GARRA: Five in favor, no
5	opposed.
6	MR. DOYLE: That's all I have. Are there
7	any others?
. 8	CHAIRMAN GARRA: Okay. Are there any
9	other conditions that the panel feels are necessary?
10	(No response.)
1,1	CHAIRMAN GARRA: Okay. Seeing no further
12	conditions, we will now proceed to a vote on the whole
13	PMA. Those in favor of approving this PMA with the
14	conditions we have just mentioned, I'd like you to
15	raise your hands.
16	Before we do that, does anybody wish to
17	have all of the conditions read to them again?
18	(No response.)
19	CHAIRMAN GARRA: Nobody seems to want to.
20	Okay. Those in favor or approval with
21	conditions under the conditions we have just discussed
22	and approved, raise your hands.
23	(Show of hands.)
24	CHAIRMAN GARRA: Five in favor. No
25	opposed.
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At this point, I'm not going to

read all of those conditions again. That's what the 2 3 script tells me to do. What we have to do at this point though, 4 I'd like each of -- I would like to go around the 5 panel and have each member briefly state the reasons 6 7 for deciding to approve this PMA with the conditions as outlined. 9 So we can start with you, John. 10 DR. SMITH: I think it's a useful device 11 as long as the end user, that is, the radiologist, 12 understands what the product actually has been demonstrated to do. 13 14 CHAIRMAN GARRA: Dr. Mehta 15 DR. MEHTA: I felt that the device should 16 be approved because unlike most of the people who voted on this, I wear a different hat. 17 My primary 18 mission, clinical mission in life is I treat patients with lung cancer, and as a consequence, I see a whole 19 host of people die of this disease, and I believe even 20 the small number of lives that we can save by early 21 22 detection is a huge step forwards. 23 felt The reason Ι conditions were necessary is because I felt that the sponsors had a 24 very limited data set on which they showed the 25

Okay.

efficacy, and it would be very nice to see this broadened in the future to a much bigger population 2 3 base. 4 CHAIRMAN GARRA: Thank you. 5 Dr. Harms. 6 DR. HARMS: agree. This is 7 substantial disease. This device, I believe, is the beginning of a new age of early detection where we may 8 have a substantial benefit, and I believe the risk is 9 10 minimal. 11 CHAIRMAN GARRA: Dr. Berg. 12 DR. BERG: I would like to congratulate the sponsor on a well prepared PMA. I thought it was 13 14 very nicely done. Ι thought the statistical considerations, the trial was conducted very well. 15 16 I am concerned that this is a very marginal benefit relative to CT, and I still have 17 1.8 reservations in that regard in clinical practice, but 19 I think that you deserve every consideration to go 20 forward with this, and this is certainly one step in 21 a process that's quite complex. 22 CHAIRMAN GARRA: Dr. Toledano I'm 23 sorry. What? Oh, Marilyn. Marilyn Peters. 24 MS. PETERS: Although I'm not a voting 25 member, I think that anything that will help in the **NEAL R. GROSS**

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early detection of any kind of cancer, and we're 1 talking lung cancer here, is a benefit for the 2 3 population. DR. TOLEDANO: This is Dr. Toledano. 4 Oh, 5 Dr. Segerson go first? No. Okay. So it's just me, Dr. Toledano, 6 and I can't say any better what my colleagues have 7 8 already said. 9 CHAIRMAN GARRA: And I get to wrap it up. I'm happy that we approved this device. The data set 10 was limited, and we had to place some conditions based 11 on that, but I think it's a start. With the coming 12 13 age of computer aided radiography, it's the start of a lot of advances in computer aided detection and 14 15 diagnosis, and I think we're all happy and proud to be 16 present at the early stages of it. 17 I would also like to thank the FDA for 18 what I consider yeoman work on doing statistical 19 analysis with this data set. It was a data set that lent itself to careful analyses every which way, and 20 21 they did that. 22 And some of the points that were brought 23 out were, I think, kind of subtle ones, and I think we 24 all learned a lot about how to evaluate these types of imaging studies from the lessons we learned today. 25

1 Thank you very much. 2 MR. DOYLE: I have a few. CHAIRMAN GARRA: Yeah. Bob Doyle has a 3 few comments. 4 5 David Segerson first. 6 MR. SEGERSON: Well, I'm not quite sure how the procedure goes at this point, but I don't want 7 to miss an opportunity to thank the panel. You've all 8 worked very hard, and I enjoyed your deliberations, 9 and you came out in spite of the threatening weather 10 that didn't quite materialize here anyhow. 11 12 But, again, on behalf of FDA, thank you 13 very much. 14 CHAIRMAN GARRA: Bob Doyle has a few comments to make, and then I'll close the meeting. 15 16 MR. DOYLE: Before we adjourn for the day, I would like to remind panel members that they are 17 18 required to return all of the materials they were sent pertaining to the PMA itself. Of course, materials 19 20 that was presented at the meeting itself, like the slides and so forth, if you're interested in keeping 21 22 those, you certainly can because that is all now public information. 23 24 Anything you want to leave behind, you can just leave at your table, and we'll have it picked up.

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If there's any material you left at home, you can send

And this comment is for the general audience here. Please pick up around your chairs cups and anything else that you might have brought into this meeting. Please, there's barrels outside the room here that you can put any materials like that.

And, again, I'll add my thanks. people came from a long distance, and as I was telling people earlier this morning, I certainly never watched the Weather Channel as much this week as I ever did

(Laughter.)

MR. DOYLE: And I had an awful lot of phone calls on my machine yesterday about this meeting, but we did get a quorum, and we had the five members we needed here, and I really appreciate it because I know it was an effort for many of you to get here, and really the FDA appreciates it as well.

CHAIRMAN GARRA: Okay. I'd like to finally thank each of you as members of the panel for I thought we had a great discussion today, and we sort of worked as a team and hacked out what we wanted to do here, and it was led by a very capable person, Alicia Toledano, and I would like to thank her

because she'll need these thanks to tide her over if 1 she's stranded here tonight, which is very likely. 2 3 So let's give a round of applause. 4 (Applause.) 5 CHAIRMAN GARRA: And did you want to say 6 something? 7 DR. FREEDMAN: On behalf of Deus Technologies, I'd very much like to thank the panel 8 and the FDA for all of their work in this effort. 9 are delighted to have received approval, and I want to 10 read the exact language of the conditions, but I 11 12 consider them appropriate. 13 Thank you. 14 CHAIRMAN GARRA: Thank you for coming and 15 making the presentation. I don't think we have any further business 16 17 today. So we are adjourned. (Whereupon, at 3:39 p.m., the meeting in 18 the above-entitled matter was concluded.) 19 2.0 21 22 23 24 25

CERTIFICATE

This is to certify that the foregoing transcript

in the matter of:

RADIOLOGICAL DEVICES

PANEL MEETING

Before:

FOOD AND DRUG ADMINISTRATION

CENTER FOR DEVICES AND RADIOLOGICAL HEALTH

Date:

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Place:

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